

REMARKS

Claims 1-18 and 23 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,348,524. (Paper No. 20060703 at 3).

The Examiner asserted “[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because the term plasticizer, recited in the patented claims, would embrace the constituents recited herein as an interfacial agent.” (*Id.*).

With a view toward furthering prosecution and without acquiescing to the merits of the rejection, submitted concurrently herewith and expressly contingent upon the issuance of the present application is a terminal disclaimer disclaiming the terminal part of any patent granted on the present application that would extend beyond the expiration of U.S. Patent No. 6,348,524.^{1/} Accordingly, it is respectfully submitted that the rejection is rendered moot and should be withdrawn.

Claims 1-18 and 23 were also rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 5,874,486. (Paper No. 20060703 at 3-4).

In making this rejection, the Examiner asserted that “[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because the inclusion of a composition of a dispersed starch in a continuous polymer phase is within the recitations of the patented claims. Further, the specific fluidizing

(interfacial) agents recited in the patented claims embrace those esters as recited and claimed herein. The agents may have the identical physical characteristics recited herein. **Note column 4 (lines 11 -23) which teaches the identical esters as employed herein.**" (*Id.*) (emphasis added).

Claims 1-18 and 23 were also rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,277,899. (Paper No. 20060703 at 4).

In making the rejection, the Examiner asserted that "[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because the inclusion of a composition of a dispersed starch in a continuous polymer phase is within the recitations of the patented claims. Further, the specific fluidizing (interfacial) agents recited in the patented claims embrace those esters as recited and claimed herein. The agents may have the identical physical characteristics recited herein. **Note the paragraph bridging column 3 to column 4 which teaches the identical esters as employed herein.**" (*Id.*) (emphasis added).

With respect to the rejection over U.S. Patent No. 5,874,486, we note independent claim 1, the only independent claim, of the '486 patent recites:

A polymeric composition obtained by melt-dispersing a natural filler of an organic nature in a matrix extruded from a preliminary composition comprising:
(a) a starch component;
(b) a synthetic thermoplastic polymeric component; and
(c) a fluidizing agent selected from the group consisting of C₁₂-C₂₂, fatty acids, C₁₂-C₂₂ fatty alcohols, **esters and amides of said fatty acids**, polyolefin waxes, polyglycol

... [footnote continued]

1/ As a courtesy, a copy of the terminal disclaimer as filed is attached hereto as Exhibit A.

ethers of alditols, ***polyglycerols esterified with C₁₂-C₂₂ fatty acids***, and mixtures thereof,

wherein the filler is dispersed in the matrix in an amount of from 5% to 70% by weight with respect to the total weight of the polymeric composition, and the matrix in which the filler is dispersed has a water content of less than 6% by weight.

With respect to the rejection over U.S. Patent No. 6,277,899, we note independent claim 1, the only independent claim, of the '899 patent recites:

A polymeric composition comprising a filler melt-dispersed in a matrix comprising:

- (a) a destructureized starch component;
 - (b) a synthetic thermoplastic polymeric component selected from the group consisting of polyvinylalcohol, polyvinyl acetate, thermoplastic polyesters and graft copolymers of polysaccharides; and
 - (c) a fluidizing agent selected from the group consisting of C₁₂-C₂₂ fatty acids, C₁₂-C₂₂, fatty alcohols, ***esters and amides of said fatty acids***, polyolefin waxes, polyglycol ethers of alditols, ***polyglycerols esterified with C₁₂-C₂₂ fatty acids***, and mixtures thereof,
- wherein said filler is a mixture of an inorganic filler and a filler of organic nature, wherein the organic filler is present in an amount from 5% to 70% by weight.

Here, in contrast, claim 1 recites:

A biodegradable heterophase polymeric composition having good resistance to ageing and to low humidity conditions, the composition comprising

a thermoplastic starch

a thermoplastic polymer incompatible with starch, wherein the starch is in a dispersed phase and the thermoplastic polymer is in a continuous phase, and

an interfacial agent which is ***an ester having an hydrophilic/lipophilic balance index value (HLB) greater than 8, which ester is obtained from a polyol or a mono- or polycarboxylic acid having a dissociation constant pK lower than 4.5***, wherein the pK value refers to the first carboxyl group of the polycarboxylic acid.

The burden in an obviousness-type double patenting rejection is not easy to meet because such a rejection requires (1) that the Examiner first determine whether

to apply a one-way test or a two-way test, and then (2) that the Examiner apply the test selected. *In re Braat*, 19 USPQ2d 1289, 1292 (Fed. Cir. 1991) (“We note at the outset the difficulty which arises in all obviousness-type double patenting cases of determining when a claim is or is not an obvious variation of **another claim.**” (emphasis in original)).

While the specification may be used for learning the meaning of terms in a claim, resort to a patent’s specification may **never** be had to read limitations into a claim and thereby change the scope of an asserted claim.

As Judge Rich explained in *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1281-82, 23 USPQ2d 1839, 1843 (Fed. Cir. 1992), well settled precedents “**prohibit**” the use of the disclosure of a patent cited to support alleged double patenting.² Here, again, the Examiner does exactly that by relying on

² **Precedents Prohibit Use of Disclosure of Patent Cited to Support Double Patenting:**

Our precedent makes clear that the **disclosure** of a patent cited in support of a double patenting rejection cannot be used as though it were prior art, **even where the disclosure is found in the claims.** See, e.g., *Braat*, 937 F.2d at 594 n. 5, 19 USPQ2d at 1293 n. 5 (“The patent disclosure must not be used as prior art”); *Vogel*, 422 F.2d at 442, 164 USPQ at 622 (in considering obviousness-type double patenting, “the patent disclosure may not be used as prior art”); *In re Plank*, 399 F.2d 241, 242, 158 USPQ 328, 329 (CCPA 1968) (“Its claims [Plank et al. patent] are used as the basis for a double patenting rejection. It is not a prior art reference”); *In re Aldrich*, 398 F.2d 855, 859, 158 USPQ 311, 314 (CCPA 1968) (“double patenting rejections **cannot** be based on section 103, ... or on the disclosures of the patents whose claims are relied on to demonstrate double patenting or on the ‘disclosures’ of their claims... [P]atent claims are looked to only to see what **has been patented**, the subject matter which **has been protected**, not for something one may find to be disclosed by reading them”); *In re Boylan*, 392 F.2d 1017, 1018 n.1, 157 USPQ 370, 371 n. 1 (CCPA 1968) (“in analyzing cases of these types, it must always be carefully observed that the appellant’s patent is not ‘prior art’ under either section 102 or section 103 of the 1952 Patent Act”); *In re Braithwaite*, 379 F.2d 594, 600 n. 4, 154 USPQ 29, 34 n. 4 (CCPA 1967) (“While analogous to the non-obviousness requirement of 35 U.S.C. § 103, that section is not itself involved in double patenting rejections because the patent principally underlying the rejections is not prior art”); *Borah*, 354 F.2d at 1018, 148 USPQ at 221 (“We have no prior art here”); *In re Sutherland*, 347 F.2d 1009, 1015, 146 USPQ 485, 491 (CCPA 1965) (“Nor is obviousness invariably involved in ‘double patenting’ rejections. Claims relied on in such [double patenting] rejections often disclose or name the **very thing** being claimed [in the rejected claims]. Furthermore, the words of such claims cannot be treated as ‘prior art,’...but are looked to

[footnote continued]...

"column 4 (lines 11 -23)" of the '486 patent and "the paragraph bridging column 3 to column 4" of the '899 patent to support the double patenting rejections. (Paper No. 20060703 at 4).

Even if the Examiner's assertion that "[i]t is, indeed, permissible to look to the [s]pecification to know what may be intended thereby" is correct, the Examiner then goes on to *wrongly* characterize those passages by asserting that they "teach[] the *identical esters* as employed" by the presently claimed invention. (*Id.* at 4-5). This is simply *wrong*. The fluidizing agents recited in these two patents, and *in the claims* of these two patents, do not "embrace" the esters recited in the present claims as the Examiner asserts. (*Id.*).

The limitation in the claims of these two patents recites "a fluidizing agent selected from the group consisting of C₁₂-C₂₂, fatty acids, C₁₂-C₂₂ fatty alcohols, **esters and amides of said fatty acids**, polyolefin waxes, polyglycol ethers of alditols, **polyglycerols esterified with C₁₂-C₂₂ fatty acids**, and mixtures thereof."

The esters of the presently claimed invention are not "embraced" by the esters claimed in the '486 and the '899 patents because the presently claimed HLB of "greater than 8" is outside the scope of the esters claimed in these two patents, which have an HLB of at most 5.5 - meaning that the hydrophilic/lipophilic balance of the esters of the present claims are more shifted towards the hydrophilic properties. (See Specification at page 4, lines 7-10). Also, the esters in the presently claimed invention

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solely for the purpose of determining *what has already been patented*. They are not treated as prior art for the simple reason they are no more 'prior art' under the statute than the specification") (citation omitted); *In re Sarett*, 327 F.2d 1005, 1013, 140 USPQ 474, 481 (CCPA

[footnote continued]...

are water soluble, while the esters claimed in the '486 and the '899 patents are water insoluble. (See Specification at pages 4-5 and page 7, last line). As discussed in applicants' specification, the effectiveness of the water soluble esters "varies in dependence" of the pK values of the acid and decreases as the pK increases. (See Specification at page 5, penultimate paragraph). This indicates that esters of the fatty acid wherein the pK of the acid is higher than the claimed limit of 4.5 does not have the hydrophilic properties of water soluble esters. Therefore, it is respectfully submitted that the esters claimed in the '486 and the '899 patents are a different class of esters than the esters of the presently claimed invention (*i.e.*, "an ester having an hydrophilic/lipophilic balance index value (**HLB**) **greater than 8**, which ester is obtained from a polyol or a mono- or polycarboxylic acid having a dissociation constant **pK lower than 4.5**, wherein the pK value refers to the first carboxyl group of the polycarboxylic acid" (emphasis added)).

Moreover, the function performed by the esters of the present claims is of compatibility between the starch particles and the incompatible thermoplastic polymer by the interaction between the free alcohol groups of the esters with the hydroxyl groups of starch and the interaction between the ester groups with the matrix. (See Specification at page 5, lines 18-26). The recited function of the esters claimed in the '486 and the '899 patents is that of "a fluidizing agent," *i.e.*, a lubricant, which is a completely different function from that performed by the esters of the present claims. The fine microstructure of starch obtained using the esters of the present claims is at

... [footnote continued]

1964) ("We are not here concerned with what one skilled in the art would be aware [of] from **reading** the claims but **what inventions the claims define**.").

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least one order of magnitude smaller than that of the particles of compositions prepared, even in favorable rheological conditions, in the absence of the claimed esters. The obtained average numeral size of the starch particles is between 0.1 and 0.5 microns and more than 80% of the particles have a size of less than 1 micron. (See Specification at page 7). This microstructure cannot be obtained using the esters of fatty acids performing a fluidizing action, and therefore the esters claimed in the '486 and the '899 patents cannot "embrace" the presently claimed compositions - whose properties of good resistance to aging and to low humidity also cannot be obtained with the compositions claimed in these two patents.

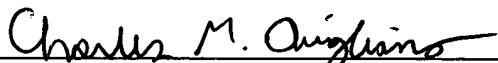
Therefore, the rejection fails to disclose *where in claims 1-19* of U.S. Patent No. 5,874,486 and *claims 1-10* of U.S. Patent No. 6,277,899 there is a suggestion or motivation for "an interfacial agent which is an ester having an hydrophilic/lipophilic balance index value (*HLB*) **greater than 8**, which ester is obtained from a polyol or a mono- or polycarboxylic acid having a dissociation constant *pK lower than 4.5*, wherein the pK value refers to the first carboxyl group of the polycarboxylic acid" as recited in claim 1.

In view of remarks set forth above, it is respectfully submitted that the obviousness-type double patenting rejections of claims 1-18 and 23 over claims 1-19 of U.S. Patent No. 5,874,486 and claims 1-10 of U.S. Patent No. 6,277,899 cannot stand and should be withdrawn.

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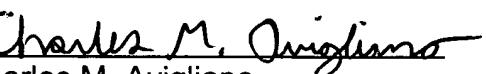
For the reasons set forth above, withdrawal of the rejections and allowance of all claims are respectfully requested. If the Examiner has any questions regarding this paper, please contact the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 9, 2006.



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